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EXAMINER	
COMSTOCK, NATHAN	

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1783	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/590,655	OHTANI ET AL.	
	Examiner	Art Unit	
	NATHAN E. COMSTOCK	1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/25/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 is objected to because of the following informalities: in line 5, it appears that the phrase "DS2, DS3 and DS6 respectively representing" should read "DS2, DS3 and DS6 respectively represent". Appropriate correction is required.

2. Claims 2 and 19 are objected to because of the following informalities: claims 2 and 19 each lack a period at the end of the claim. Appropriate correction is required.

3. Claims 27 is objected to because of the following informalities: in line 3, it appears that the phrase "at least one of a cellulose acylate film according to claim 1" should either read "at least one cellulose acylate film according to claim 1" or "a cellulose acylate film according to claim 1". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 26 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 26 recites that the polarizing plate is packaged in a moisture proofed bag, wherein the moisture proofed bag has a first humidity. It is unclear how the bag has a humidity. Humidity is a characteristic of gasses. Does Applicant intend the first humidity to mean a

humidity inside the bag (i.e. an internal humidity) or something else? For purposes of examination, the first humidity will be construed as the humidity of some gas inside the bag.

7. Claim 26 further claim that the first humidity is within +/- 15% RH of a second humidity, wherein the polarizing plate is superposed on a liquid crystal cell at the second humidity. It is unclear what is meant by the phrase "wherein the polarizing plate is superposed on a liquid crystal cell at the second humidity." Is this intended to mean that the polarizing plate is superposed on a liquid crystal cell at the second humidity then packaged in a moisture proof bag? Or is it intended to mean the plate is packaged in the bag at the first humidity, and intended to be removed from the bag and superposed on a liquid crystal cell at the second humidity at some point in the future? Or is the polarizing plate intended to be superposed on the liquid crystal cell while packaged in the bag (at which point wouldn't the first and second humidities necessarily be the same?)? For purposes of examination, the polarizing plate will be construed as being packaged in the bag, and intended to be removed at some point in the future to be superposed on the liquid crystal cell at the second humidity.

8. Claim 29 recites the limitation "the polarizing plate" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-16 and 18-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2004-026925 A1 to Ito (of which the Examiner is using a machine translation).

13. Ito discloses a cellulose acylate film (corresponding to Applicant's cellulose acylate film), wherein the film has a retardation Re of between 0 and 70 nm (corresponding to Applicant's $46 \leq Re(630) \leq 200$, where claimed ranges overlap or lie inside the ranges disclosed in the prior art, a prima facie case of obviousness exists. See MPEP 2144.05), and a retardation Rth of 70 to 400 nm (corresponding to Applicant's $70 \leq Rth(630) \leq 350$ and $160 \leq Rth(630) \leq 350$, where claimed ranges overlap or lie inside the ranges disclosed in the prior art, a prima facie case of obviousness exists. See MPEP 2144.05) (paragraph [0004]).

14. The cellulose acylate film comprises a cellulose ester/acetate (cellulose is a polymer of glucose [corresponding to Applicant's glucose unit of cellulose]), wherein a hydroxyl groups of the 2nd place (corresponding to Applicant's 2 position), 3rd place (corresponding to Applicant's 3 position), and 6th place (corresponding to Applicant's 6 position) are substituted by acetyl groups (acetyl groups are acyl groups having 2 carbons) (corresponding to Applicant's hydroxyl group substituted by an acyl group having 2 or more carbons/acyl group is acetyl in claim 3) with an acetylation degree of 57% to 62% (a degree of acetylation corresponds to a total degree of substitution (i.e. DS2+DS3+DS6) according to the formula: Deg_Acet = MW acetic acid (i.e. 60.06) / [MW glucose unit (i.e. 162.16) – Deg_Sub *MW hydroxyl (i.e. 17.01) + Deg_Sub (MW acetyl (i.e. 59.05)], which simplifies to Deg_Sub = 162.16 * Deg_Acet / (60.06 – 42.04 * Deg_Acet), where Deg_Sub is total degree of substitution and Deg_Acet is acetylation degree). An acetylation degree of 57% to 62% corresponds to a degree of substitution of 2.56 to 2.95 (corresponding to Applicant's $2.00 \leq DS2+DS3+DS6 \leq 3.00$) (paragraphs [0006]-[0007]). The hydroxyl group at the 6th place is substituted by an acyl group by at least 32% to the whole degree of substitution (corresponding to Applicant's $DS6/(DS2+DS3+DS6) \geq 0.315$)) (paragraph [0007]).

15. With respect to claim 4, the cellulose acylate film comprises a retardation raising agent (corresponding to Applicant's retardation producing agent) wherein the retardation raising agent is a disc-line liquid crystallinity compound (corresponding to Applicant's discotic compound (paragraph [0004]).

16. With respect to claim 5, it is preferred to add ethylinically unsaturated monomers having ultraviolet absorption groups to the cellulose acylate film (corresponding to Applicant's ultraviolet ray absorbent) (paragraphs [0013], [0017]).

17. With respect to claim 6, the cellulose acylate film has a thickness of 30 to 180 μm (corresponding to Applicant's 40 to 110 μm; where claimed ranges overlap or lie inside the ranges disclosed in the prior art, a prima facie case of obviousness exists. See MPEP 2144.05) (paragraph [0046]).

18. With respect to claim 7, the ethylinically unsaturated monomer is added to the cellulose acylate film in an amount of 20 to 60% by weight of cellulose acylate (corresponding to Applicant's additive in an amount of 10 to 30% by weight of cellulose acylate) (paragraph [0013]).

19. With respect to claim 8, one of ordinary skill in the art at the time of the invention would have expected the cellulose acylate film of Ito would have ΔRe of 12 nm or less and a ΔRth of 32 nm or less because Ito teaches that it is preferable to polymerize the cellulose acylate film with a polymerization nature monomer to inhibit dimension change of the film (paragraph [0012]), and the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim

13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate has similar polarization degree (see analysis of claim 21) as compared to the claimed film, and would therefore be expected to have similar properties.

20. Alternatively, it would have been obvious to one of ordinary skill in the art to form the cellulose acylate film of Ito having a ΔRe of 12 nm or less and a ΔRth of 32 nm or less. One of ordinary skill in the art would have been motivated to do so in order to minimize the changes in retardation properties of the film (and thus the degradation of display performance for a display including the film) due to changes in the ambient humidity.

21. With respect to claim 9, one of ordinary skill in the art at the time of the invention would have expected that the cellulose acylate film of Ito would have an equilibrium moisture content at 25°C and 80% relative humidity of 3.4% or less, because the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim 13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate has similar polarization degree (see analysis of claim 21) as compared to the claimed film, and would therefore be expected to have similar properties.

22. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce the cellulose acylate film of Ito having an equilibrium moisture content of 3.4% or less at 25°C and 80%RH. One of ordinary skill in the art would have been motivated to do so in order to minimize the dimensional change due to changing moisture contents of the film, in order to maintain consistent optical properties (and hence display performance) during changes in humidity.

23. With respect to claim 10, one of ordinary skill in the art at the time of the invention would have expected that the cellulose acylate film of Ito to have a water vapor permeability of from 400 to 2300 g/m^2 *24 hr for a film thickness of 80μm at 60°C and 95%RH, because the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim 13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate has similar polarization degree (see analysis of claim 21) as compared to the claimed film, and would therefore be expected to have similar properties.

24. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the cellulose acylate film of Ito having a water vapor permeability of from 400 to 2300 g/m^2 *24 hr for a film thickness of 80μm at 60°C and 95%RH. One of ordinary skill

in the art would have been motivated to do so in order to allow moisture from an adhesive for attaching the cellulose acylate film and the polarizer to escape the assembly, and to simultaneously minimize the amount of moisture that can permeate into the polarizer through the cellulose acylate film.

25. With respect to claim 11, one of ordinary skill in the art at the time of the invention would have expected the cellulose acylate film of Ito to undergo a change in weight of from 0 to 5% when allowed to stand for 48 hours under a condition of 80°C and 90% RH, because the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim 13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate has similar polarization degree (see analysis of claim 21) as compared to the claimed film, and would therefore be expected to have similar properties.

26. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the cellulose acylate film of Ito such that it would undergo a change in weight of from 0 to 5% when allowed to stand for 48 hours under a condition of 80°C and 90% RH. One of ordinary skill in the art would have been motivated to do so in order to minimize the dimensional change of the film under high temperature and humidity conditions, such that the

quality of the display into which it is incorporated would not be degraded under high temperature and humidity conditions.

27. With respect to claim 12, one of ordinary skill in the art at the time of the invention would have expected the cellulose acylate film of Ito to undergo a change in dimensions of from -2 to 2% when allowed to stand for 24 hours under each of a condition of 60°C and 95% RH and a condition of 90°C and 5%RH, because Ito teaches that it is preferable to polymerize the cellulose acylate film with a polymerization nature monomer to inhibit dimension change of the film (paragraph [0012]).

28. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the cellulose acylate film of Ito such that it would undergo a change in dimensions of from -2 to 2% when allowed to stand for 24 hours under each of a condition of 60°C and 95% RH and a condition of 90°C and 5%RH. One of ordinary skill in the art would have been motivated to do so in order to minimize the dimensional change of the film under high temperature and/or humidity conditions, such that the quality of the display into which it is incorporated would not be degraded under high temperature and/or humidity conditions.

29. With respect to claim 13, the cellulose acylate film has a glass transition temperature of 150°C or less (corresponding to Applicant's glass transition temperature of 80°C to 180°C; where claimed ranges overlap or lie inside the ranges disclosed in the prior art, a prima facie case of obviousness exists. See MPEP 2144.05) (paragraph [0053]).

30. With respect to claim 14, one of ordinary skill in the art at the time of the invention would have expected the cellulose acylate film of Ito to have an elastic modulus of from 1500 to 5000 MPa, because Ito teaches that it is preferable to polymerize the cellulose acylate film with a

polymerization nature monomer to raise the elastic modulus of the film (paragraph [0012]-[0013]).

31. With respect to claim 15, one of ordinary skill in the art at the time of the invention would have expected the cellulose acylate film of Ito to have a photoelasticity coefficient of 50 * 10^{-13} cm^2/dyne or less, because the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim 13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate has similar polarization degree (see analysis of claim 21) as compared to the claimed film, and would therefore be expected to have similar properties.

32. With respect to claim 16, the haze of the film is 1% or less (corresponding to Applicant's haze of 0.01 to 2%; where claimed ranges overlap or lie inside the ranges disclosed in the prior art, a prima facie case of obviousness exists. See MPEP 2144.05) (paragraph [0051]).

33. With respect to claim 18, as disclosed previously, the film has a retardation Re of between 0 and 70 nm and a retardation Rth of 70 to 400 nm which corresponds to Applicant's Re and Rth satisfying formula B, as described below. The claimed Re and the disclosed Re overlap in the range of 46 nm to 70 nm. Based on Applicant's formula B, the Rth, for would need to be

between 309 nm and 399 nm if the Re was 46 nm, between 167 nm and 257 nm if the Re was 70. Because the claimed range of Rth overlaps the disclosed range of Rth where the claimed range of Re overlaps the disclosed range of Re, a prima facie case of obviousness exists. See MPEP 2144.05.

34. With respect to claim 19, one of ordinary skill in the art at the time of the invention would have expected the cellulose acylate film of Ito to satisfy formulas D and E, because the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim 13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate has similar polarization degree (see analysis of claim 21) as compared to the claimed film, and would therefore be expected to have similar properties.

35. With respect to claim 20, disclosed is a polarizing plate comprising a polarizing film (corresponding to Applicant's polarizer) with protective films on both of its sides, wherein at least one of the protective films is the above described cellulose acylate film (corresponding to Applicant's protective film comprising a cellulose acylate film of claim 1) (paragraph [0004] (7)).

36. With respect to claim 21, the polarization plate has a polarization degree of between 99 and 100% (corresponding to Applicant's $95.0 \leq P$) (paragraph [0081]).

37. With respect to claim 22, one of ordinary skill in the art at the time of the invention would have expected the polarizing plate of Ito to have cross transmittances within the claimed ranges because the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim 13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate in the same manner has similar polarization degree (see analysis of claim 21) as compared to the claimed cellulose acylate film and polarizing plate, and the polarizing plate resulting from the combination of the cellulose acylate film and a iodine doped PVA polarizing plate as disclosed by Ito (see paragraphs [0073]-[0075]) would therefore be expected to have similar properties.

38. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the polarizing plate of Ito such that the plate has a cross transmittance as low as possible throughout the visible spectrum (roughly including the range 380nm to 700nm), and specifically below 2% at a wavelength of 380 nm, below 0.1% at a wavelength of 410 nm, and below 0.5% at a wavelength of 700 nm. One of ordinary skill in the art would have been

motivated to do so because decreasing cross transmittance of the polarizers in a display decreases the light leakage and increases the contrast (i.e. causes the displayed blacks to be darker), and decreasing cross transmittance across the full range of visible light would be required in order to effect the decrease in light leakage and increase in contrast across all light colors in the visible spectrum.

39. With respect to claim 23, one of ordinary skill in the art at the time of the invention would have expected the polarizing plate of Ito to have changes in cross transmittance and polarization degree within the claimed ranges because the cellulose acylate film of Ito has a similar cellulose material (see analysis of claim 1), has the same total degree of substitution (see analysis of claim 1), the same degree of substitution at the DS6 position (see analysis of claim 1), the same substitutents (see analysis of claims 1 and 3), similar retardation properties (claims analysis of 1-2 and 18), a similar amount of retardation raising agents (see analysis of claim 4, and paragraph [0009]), similar additives (see analysis of claims 5 and 7), a similar thickness (see analysis of claim 8), similar dimensional properties (see analysis of claim 12), a similar glass transition temperature (see analysis of claim 13), a similar haze (see analysis of claim 16), similar particles (see paragraph [0040]), and when combined to form a polarizing plate in the same manner has similar polarization degree (see analysis of claim 21) as compared to the claimed cellulose acylate film and polarizing plate, and the polarizing plate resulting from the combination of the cellulose acylate film and a iodine doped PVA polarizing plate as disclosed by Ito (see paragraphs [0073]-[0075]) would therefore be expected to have similar properties.

40. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the polarizing plate of Ito such that the change in cross transmittance would

be less than +/- 6% and the change in polarization degree would be less than -10% after the polarization plate is allowed to stand at 60°C and 95%RH for 500 hours. One of ordinary skill in the art would have been motivated to do so because decreasing the change in cross transmittance and polarization degree over time (at any given temperature and humidity) decreases the degradation of screen brightness and contrast in a display incorporating the polarizers, wherein the relatively high temperature and humidity would accelerate any degradation effect.

41. With respect to claim 24, the cellulose film (and in turn the polarizing plate) may be provided with a hard court layer (corresponding to Applicant's hard coat layer) (paragraph [0042]).

42. With respect to claim 25, the limitation that the polarizing plate is packed in a moisture proof bag wherein the moisture proof bag has an internal humidity of from 43 to 70% at 25°C is a statement of intended use, in that the polarizing plate is being claimed, not a bag which contains a polarizing plate. Statements of intended use of a claimed invention must result in a structural difference from the prior art in order to patentably distinguish the claimed invention from the prior art. Here, the article disclosed in the prior art would have been capable of being packaged in a moisture proof bag so claimed, and thus the intended use would not necessitate any structural limitations not present in the prior art.

43. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to package the polarizing plate of Ito in a moisture proofed bag having an internal humidity of 43 to 70% RH at 25°C. One of ordinary skill in the art would have been motivated to do so due to the moisture sensitivity of the polarizing plate, as taught by Ito (see

44. With respect to claim 26, per the 35 U.S.C. 112, second paragraph, rejection of claim 26, supra, the phrase "wherein the polarizing plate is superposed on a liquid crystal cell at the second humidity is being construed as an operation intended to occur at some point in the future, and as such is a statement of intended use. Statements of intended use of a claimed invention must result in a structural difference from the prior art in order to patentably distinguish the claimed invention from the prior art. Here, the article disclosed in the prior art is capable of being superposed on a liquid crystal cell at a humidity similar to (i.e. within +/- 15% RH of) the humidity at which it is packaged in the bag as claimed, and thus the intended use would not necessitate any structural limitations not present in the prior art.

45. The limitation that the polarizing plate is packed in a moisture proof bag wherein the moisture proof bag has first humidity within +/- 15% RH of a second humidity, wherein the polarizing plate is superposed on a liquid crystal cell at the second humidity is a statement of intended use, in that the polarizing plate is being claimed, not a bag which contains a polarizing plate. Statements of intended use of a claimed invention must result in a structural difference from the prior art in order to patentably distinguish the claimed invention from the prior art. Here, the article disclosed in the prior art would have been capable of being packaged in a moisture proof bag so claimed, and thus the intended use would not necessitate any structural limitations not present in the prior art.

46. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to package the polarizing plate of Ito in a moisture-proofed bag at a relative humidity similar to (i.e. within +/- 15 RH of) the humidity at which the polarizing plate is intended to be superposed on a liquid crystal cell. One of ordinary skill in the art would have

been motivated to do so in order to minimize any difference in dimensional change between the polarizing plate and the liquid crystal cell after superposing them when the polarizing plate and liquid crystal cell equilibrate to the same ambient humidity to avoid degradation of a display into which they are incorporated.

47. With respect to claim 27, disclosed is a liquid crystal display (corresponding to Applicant's liquid crystal display) whose liquid crystal cell (corresponding to Applicant's liquid crystal cell) is of OCB mode (corresponding to Applicant's OCB-mode), VA mode (corresponding to Applicant's VA mode) or TN mode, wherein the display comprises a cellulose acylate film as described above (corresponding to Applicant's cellulose acylate film of claim 1) between the liquid crystal cell and a polarizing film (paragraph [0004] (8)-(9)).

48. With respect to claim 28, Ito discloses that a single cellulose acylate film may be used in a display (corresponding to Applicant's liquid crystal cell contains only one cellulose acylate film) (paragraph [0008] and [0084]; where a polarization plate of the of Ito is only used on one side of the display), and as disclosed previously, the display may be a VA mode display (corresponding to Applicant's VA mode liquid crystal cell) (see paragraph [0084]).

49. With respect to claim 29, Ito discloses forming the polarizing plate from the cellulose acylate film, a polarizer, and a protection film on the opposite side of the polarizer from the cellulose acylate film (paragraph [0073]). Transmission type liquid crystal displays generally employ a backlight on the back side of the liquid crystal cell. In forming the transmission type liquid crystal display, the polarizing plates of the Ito may be used on both sides of the liquid crystal cell (paragraph [0084]), and therefore, at least one polarizing plate and the included cellulose acylate film would be between the liquid crystal cell and the backlight (corresponding

to Applicant's cellulose acylate film and polarizing plate between the liquid crystal cell and the backlight). As disclosed previously, the display may be a VA mode display (corresponding to Applicant's VA mode liquid crystal cell) (see paragraph [0084]).

50. Therefore, claims 1-16 and 18-29 are rejected as obvious over the cited art.

51. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2004-026925 A1 to Ito (of which the Examiner is using a machine translation) as applied to claims 1-16 and 18-29 above, and further in view of US PGP No. 2002/0102369 to Shimzu et al.

52. Ito discloses a cellulose acylate film as described with respect to the 35 U.S.C. 103(a) rejection of claims 1-16 and 18-29, supra.

53. Ito further discloses that inorganic particles, and preferably silicon dioxide particles (corresponding to Applicant's silicon dioxide particles) among others, are added to the cellulose acylate film (paragraphs [0040]-[0041]).

54. Ito does not explicitly disclose that the particles have a secondary average particle size of from 0.2 to 1.5 μm.

55. Shimzu (2002/0102369 to Shimzu et al.) discloses cellulose ester films for use as protective films for polarizing plates (paragraph [0188]). Shimzu discloses that it is preferably to add fine particles, such as silicon dioxide, to cellulose ester films (cellulose acylates are a subset of cellulose esters) to provide optimal slip and good abrasion resistance (paragraph [0188]). Shimzu discloses that the second order particles of the fine particles have an average particle diameter of 0.01 to 1.0 μm (paragraph [0188]).

56. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the silicon dioxide fine particles of Shimzu, having a second order particles of the fine

particles have an average particle diameter (corresponding to Applicant's secondary average particle size) of 0.01 to 1.0 μm (corresponding to Applicant's 0.2 to 1.5 μm; where claimed ranges overlap or lie inside the ranges disclosed in the prior art, a prima facie case of obviousness exists. See MPEP 2144.05) as the fine particles of Ito. One of ordinary skill in the art would have been motivated to do so in order to obtain optimal slip properties and good abrasion resistance for the film, as taught by Shimzu.

57. Therefore, claim 17 is rejected as obvious over the cited art.

Double Patenting

58. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

59. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

60. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

61. Claims 1 and 4-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5-21, 23-25, 27, and 29-34 of copending Application No. 11/659,004. Although the conflicting claims are not identical, they are not patentably distinct from each other.

62. Claim 1 of the instant application corresponds to claim 5 of the '004 application. The only differences in scope between claim 5 of the '004 application and claim 1 of the instant application are that claim 5 of the '004 application additionally claims that the cellulose acylate film has a thickness variation between every 10 mm in a breadth direction of 0.6 μm or less, and that $DS2 + DS3 + DS6 \leq 2.85$ (as opposed to ≤ 3.00 as claimed in the instant application). As such, claim 5 of the '004 application recites every limitation of, and would therefore render obvious, claim 1 of the instant application. Therefore claim 1 is rejected as obvious over claim 5 of the '004 application.

63. With respect to claims 4-28 of the instant application, claims 6-21, 23-25, 27, 29-31 and 34 of the '004 application respectively correspond to claims 4-26 and 28 of the instant

application, and claims 32 and 33 each independently correspond to claim 27 of the instant application. The claims 6-21, 23-25, 27, 29-31 and 34 of the '004 application differ from claims 4-28 of the instant application in that the claims of the '004 application additionally claim that the cellulose acylate film has a thickness variation between every 10 mm in a breadth direction of 0.6 μm or less. The claims of the '004 application lack the limitation that the cellulose acylate film comprises a cellulose acylate having a glucose unit of cellulose, wherein a hydroxyl group of the glucose unit is substituted by an acyl group having 2 or more carbon atoms, wherein DS2, DS3, and DS6 respectively representing degrees of substitution of the hydroxyl groups at the 2, 3 and 6 positions of the glucose unit by the acyl group satisfy formulae (I) and (II); (I) $2.00 \leq DS2 + DS3 + DS6 \leq 3.00$; (II) $DS6 / (DS2 + DS3 + DS6) \geq 0.315$. Claim 8 of the '004 application additionally differs from claim 6 of the instant application in that claim 6 of the instant application additionally requires that the thickness of the film be from 40 to 110 μm (instead of the broader range of 40 to 180 μm in claim 8 of the '004 application, however, where claimed ranges overlap or lie inside the ranges disclosed in the conflicting claims, a prima facie case of obviousness exists. See MPEP 2144.05). Claim 29 of the '004 application additionally differs from claim 24 of the instant application in that claim 29 of the '004 application additionally claims that the additional layer is provided on a surface of a protective film provided on a side opposite to a liquid crystal cell of the polarizing plate. Claim 32 of the '004 application additionally differs from claim 27 of the instant application in that claim 32 of the '004 application additionally claims that the display is an OCB mode display and lacks the limitation that the display comprise a liquid crystal cell of OCB mode of VA mode, however, the recitation that the display is an OCB-mode liquid crystal display would presuppose the existence in the

display of an OCB mode liquid crystal cell (and hence the OCB mode liquid crystal display of claim 32 of the '004 application would include an OCB mode liquid crystal cell as claimed in claim 27 of the instant application). Claim 33 of the '004 application additionally differs from claim 27 of the instant application in that claim 32 of the '004 application additionally claims that the display is a VA mode display and lacks the limitation that the display comprise a liquid crystal cell of OCB mode of VA mode, however, the recitation that the display is a VA-mode liquid crystal display would presuppose the existence in the display of a VA mode liquid crystal cell (and hence the VA mode liquid crystal display of claim 32 of the '004 application would include a VA mode liquid crystal cell as claimed in claim 27 of the instant application).

64. Claim 5 of the '004 application teaches that one of ordinary skill in the art could make a cellulose acylate film comparable to claims 6-21, 23-25, 27, 29-31 and 34 of the '004 application, respectively, wherein the that the cellulose acylate film comprises a cellulose acylate having a glucose unit of cellulose, wherein a hydroxyl group of the glucose unit is substituted by an acyl group having 2 or more carbon atoms, wherein DS2, DS3, and DS6 respectively representing degrees of substitution of the hydroxyl groups at the 2, 3 and 6 positions of the glucose unit by the acyl group satisfy formulae (I) and (II); (I) $2.00 \leq DS2 + DS3 + DS6 \leq 2.85$; (II) $DS6 / (DS2 + DS3 + DS6) \geq 0.315$. Such a combination would have the predictable result that the resulting cellulose acylate film would comprise substitutions such that $2.00 \leq DS2 + DS3 + DS6 \leq 2.85$ and $DS6 / (DS2 + DS3 + DS6) \geq 0.315$. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the cellulose acylate films of claims 6-21, the polarizing plates of claims 23-25, 27, 29-31, and the displays of claims 32-34 of the '004 application wherein the cellulose acylate film was substituted such that $2.00 \leq DS2 + DS3 +$

$DS6 \leq 2.85$ and $DS6 / (DS2 + DS3 + DS6) \geq 0.315$. One of ordinary skill in the art would have been motivated to do so because the resulting films, plates and displays would have both the benefits of having the cellulose acylate substituted such that $2.00 \leq DS2 + DS3 + DS6 \leq 2.85$ and $DS6 / (DS2 + DS3 + DS6) \geq 0.315$ and the benefits of each of the respective claims 6-21, 23-25, 27, and 29-34. Thus, claims 4-28 of the instant application are obvious over claims 6-21, 23-25, 27, 29-31 and 34 of the '004 application in view of claim 5 of the '004 application.

65. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

66. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN E. COMSTOCK whose telephone number is (571) 270-1133. The examiner can normally be reached on Monday through Thursday, 9am-6pm Eastern Standard Time.

67. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

68. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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